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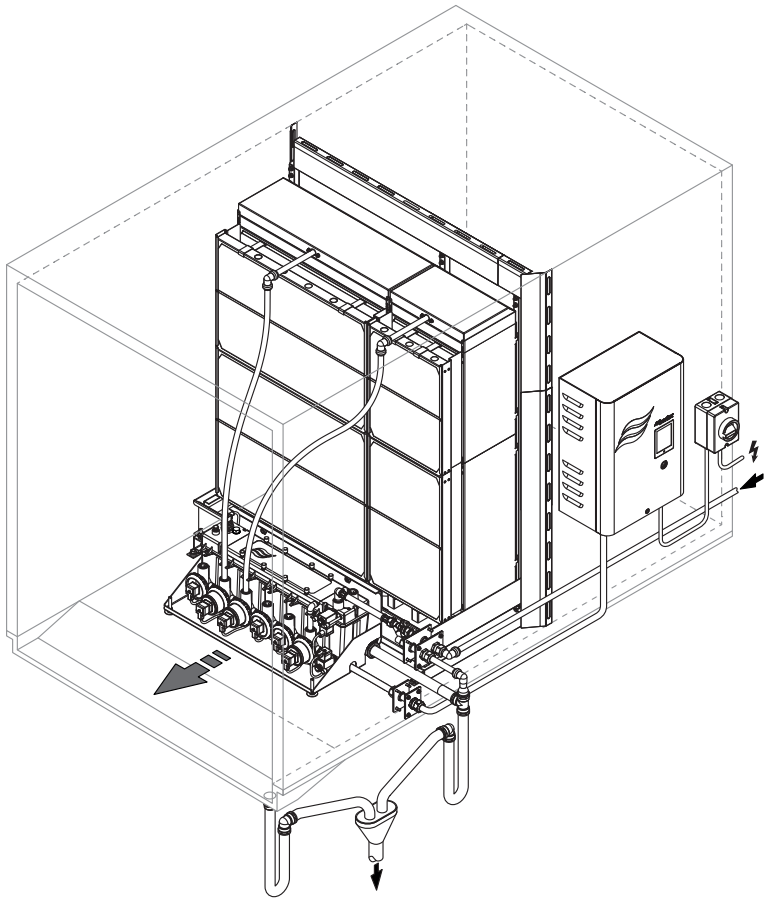
ME SERIES



PLANNING MANUAL

Adiabatic air humidification/air cooling system
Nortec **ME**

Humidification and Evaporative Cooling

nortec

Thank you for choosing Nortec

Manufacturer

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1 Introduction

1.1 Notes on the planning manual

Limitation

The subject of this planning manual is the Nortec ME Evaporative Humidifier and Cooler in its different versions.

This planning manual contains:

– system overviews of the different versions of the Nortec ME
– available options
– notes on installation requirements (duct, positioning, water quality requirements)
– requirements of the supply water to be used
– unit specifications
– system selection guide

If you have questions after reading this documentation, please contact your Nortec representative. They will be glad to assist you.

2 System overview

2.1 System versions

The Nortec ME is available in two basic system versions:

– Control system (water is circulated with pumps in the evaporative module and periodically drained)

– Direct feed system (water is drained after flowing down the evaporative cassettes)

Nortec ME Control System

Model designation	Description
Nortec ME Control	Complete system with software configurable control unit with display. Hydraulic module with pumps can be mounted internally or externally to the AHU/duct.

Nortec ME Direct Feed System

Model designation	Description
Nortec ME Direct Feed	The **standard version** includes the evaporative module and a hydraulic manifold without valves. The hydraulic manifold must be equipped with a drain and a supply as minimum. If stage control is required the hydraulic manifold can be equipped with stage valves additionally. The purge is to be fitted in the water supply line near the water inlet. All valves are available as options or must be supplied by the customer. Additionally two optional control units - one for On/Off control and for stage control are available.

2.2 System description

2.2.1 Nortec ME Control

2.2.1.1 Typical system Nortec ME Control (internal installation)

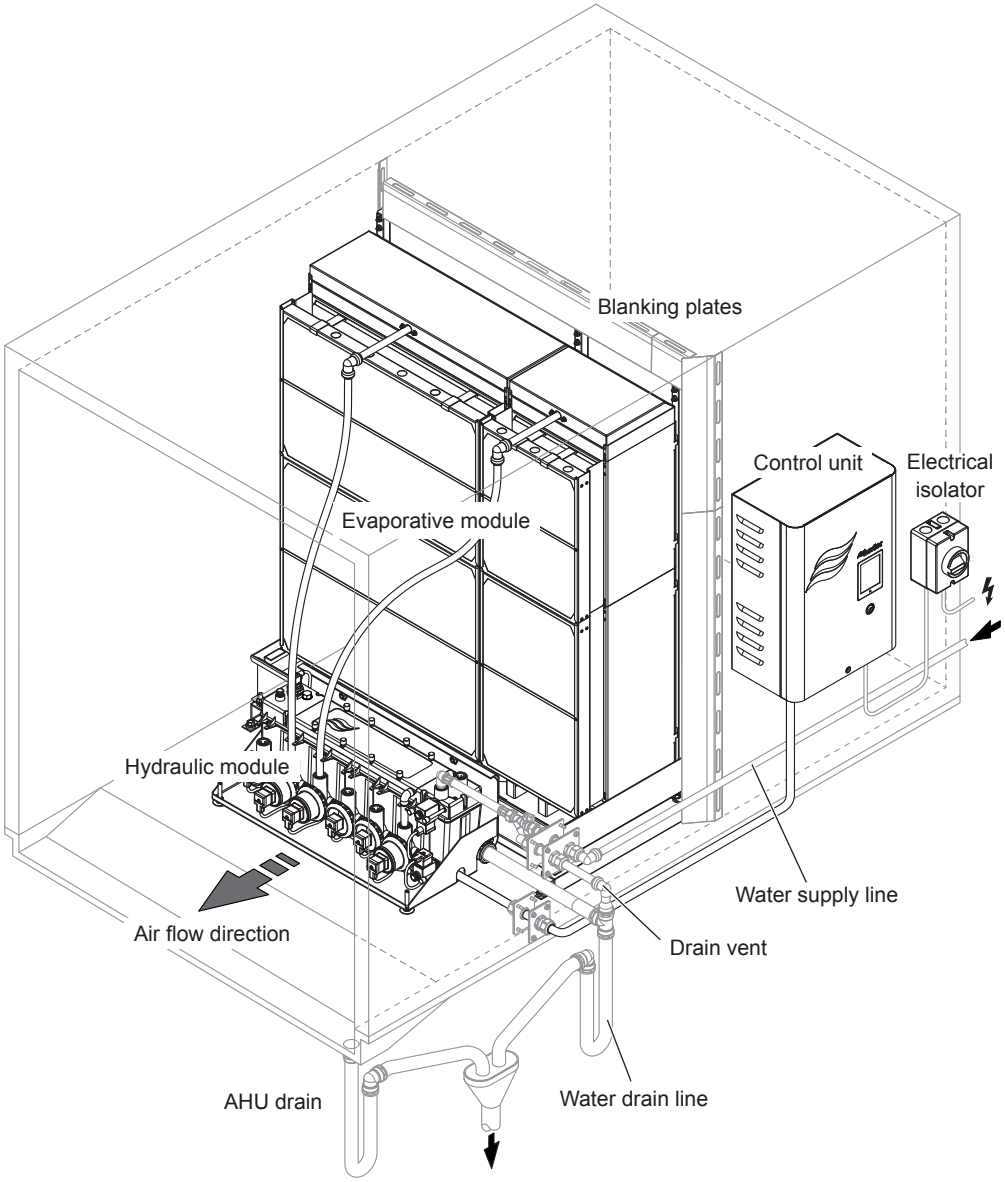


Fig. 1: Typical system Nortec ME Control (internal installation)

2.2.1.2 Typical system Nortec ME Control (external installation)

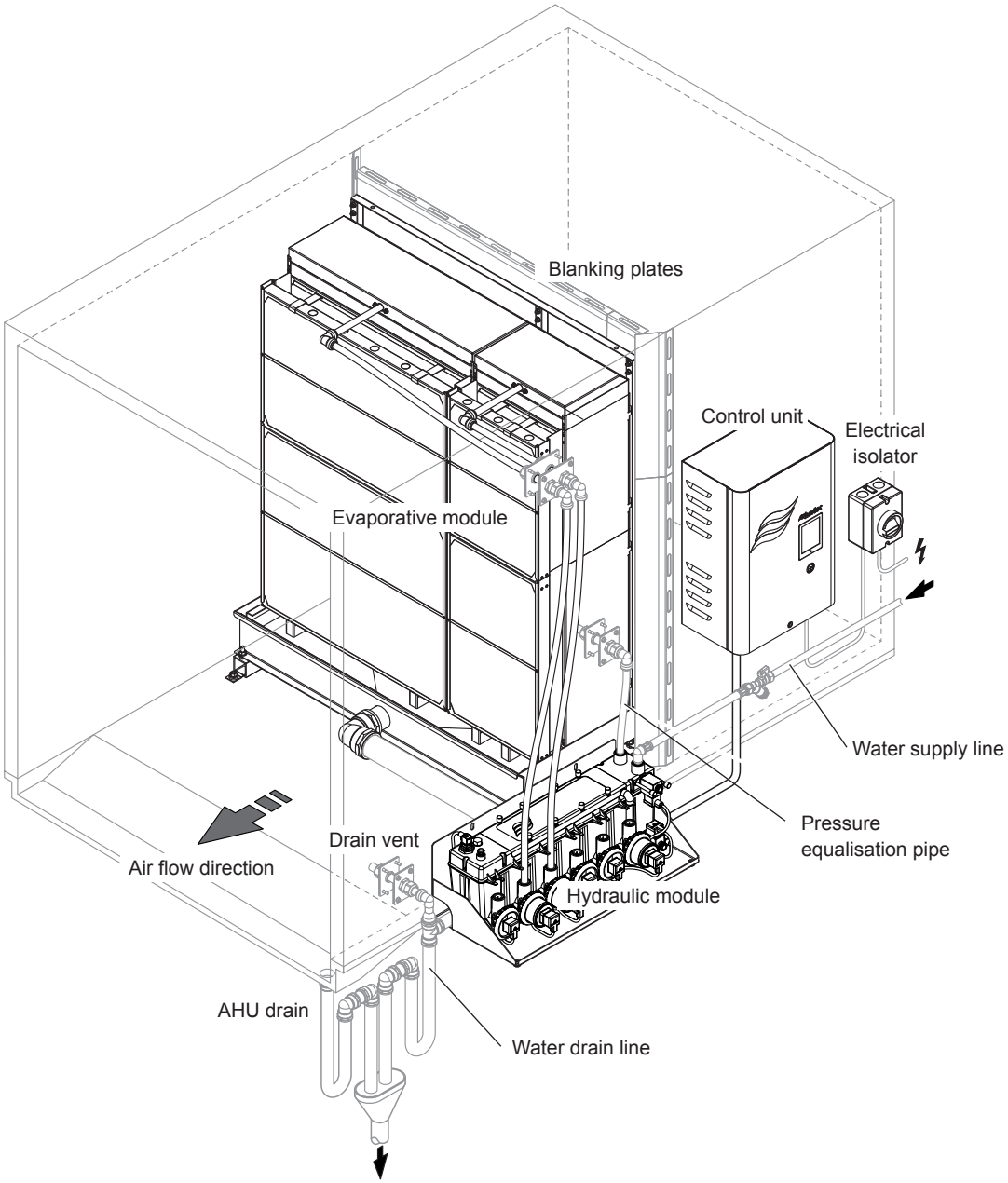


Fig. 2: Typical system Nortec ME Control (external installation)

Schematic flow diagram Nortec ME Control

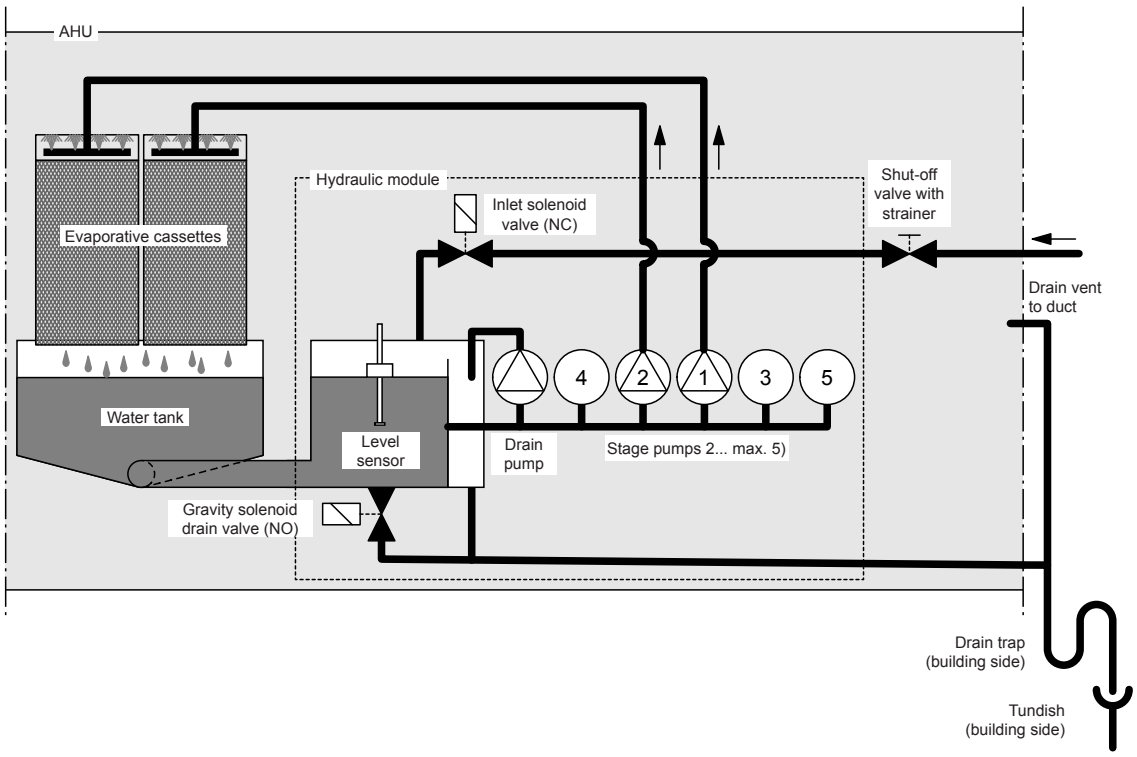


Fig. 3: Schematic flow diagram Nortec ME Control (internally mounted)

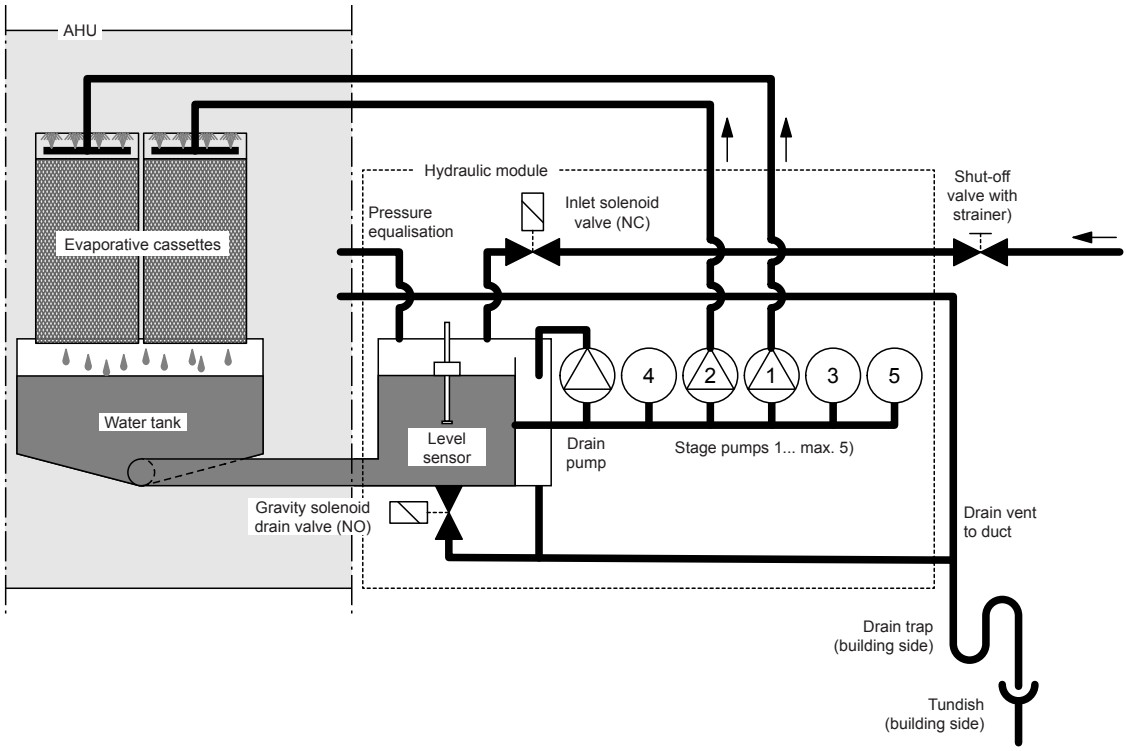


Fig. 4: Schematic flow diagram Nortec ME Control (externally mounted)

Functional description

The water tank is filled up to a preset upper level via the level-controlled inlet solenoid valve (NC). When the water level in the water tank drops below a certain limit, the level-controlled inlet solenoid valve opens until the upper limit is reached again.

The Nortec ME Control provides On/Off or stage control by means of the Nortec ME Control control unit and the stage pumps. The Nortec ME Control control unit processes analog sensor/control signals and uses them to control the stage pumps.

In case of a humidification/cooling request with **activated On/Off control** the inlet solenoid valve (NC) opens and all stage pumps start and the water flows to the distribution header above the evaporative cassettes.

In case of a humidification/cooling request with **activated stage control** the inlet solenoid valve (NC) opens, then one, two, three, four or all five stage pumps start (depending on the demand signal and evaporative module size) and the water flows to the distribution header above the evaporative cassettes.

The distribution pipes inside the distribution header evenly supply the water to the entire surface of the evaporative cassettes where it flows down and humidifies the air flowing through the evaporative cassettes. The excess water not used for humidification flows to the water tank.

To prevent accumulation of mineral residues and the formation of germs in the water tank, the tank is completely drained periodically (interval or time controlled). Additionally further hygiene functions can be activated: Operation-dependent draining of the water tank (fill cycle, conductivity, temperature or time controlled).

2.2.2 Nortec ME Direct Feed

2.2.2.1 Typical system Nortec ME Direct Feed (internal installation)

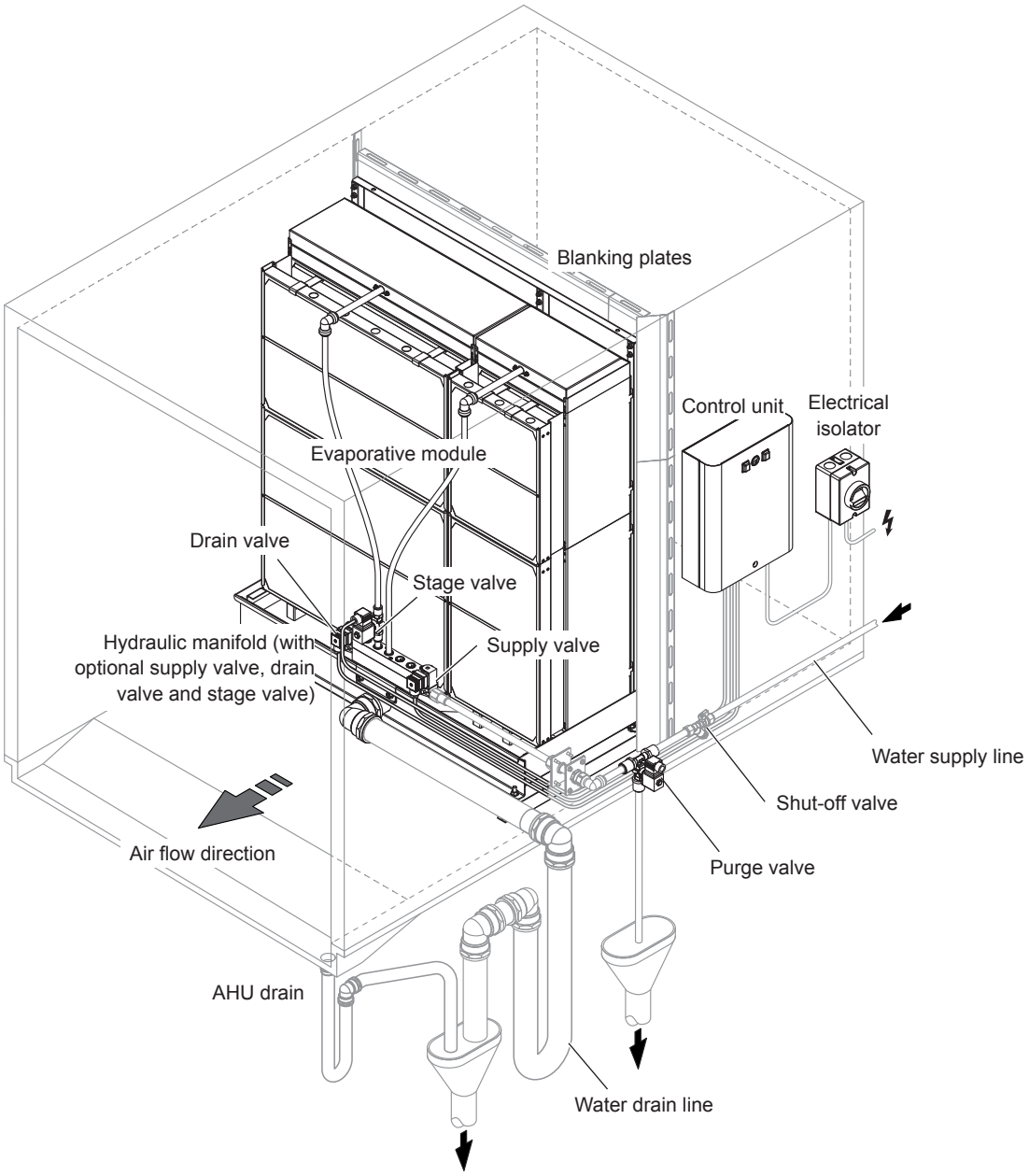


Fig. 5: Typical system Nortec ME Direct Feed (internal installation with optional valves)

2.2.2.2 Typical system Nortec ME Direct Feed (external installation)

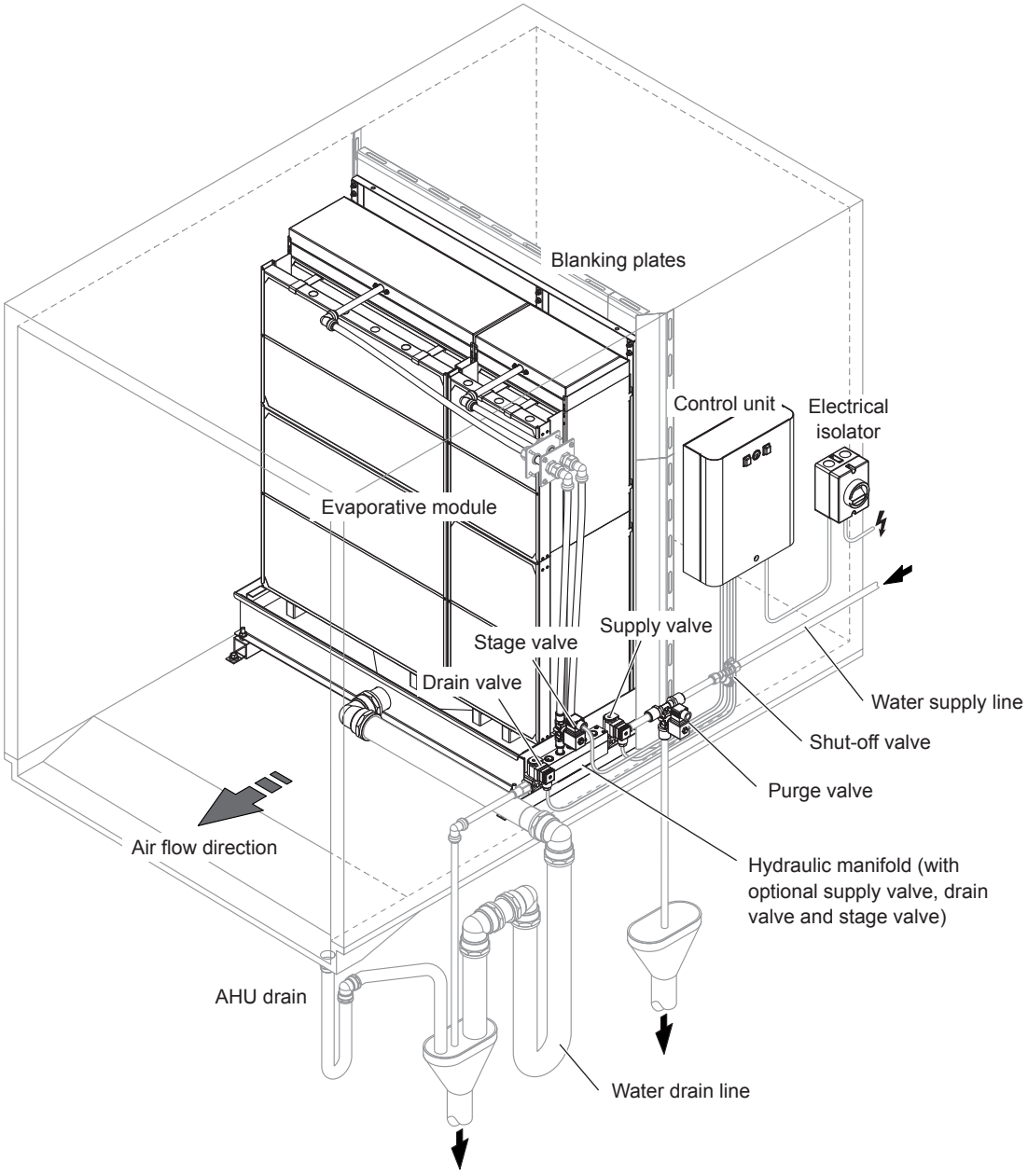


Fig. 6: Typical installation Nortec ME Direct Feed (external installation)

Schematic flow diagram Nortec ME Direct Feed

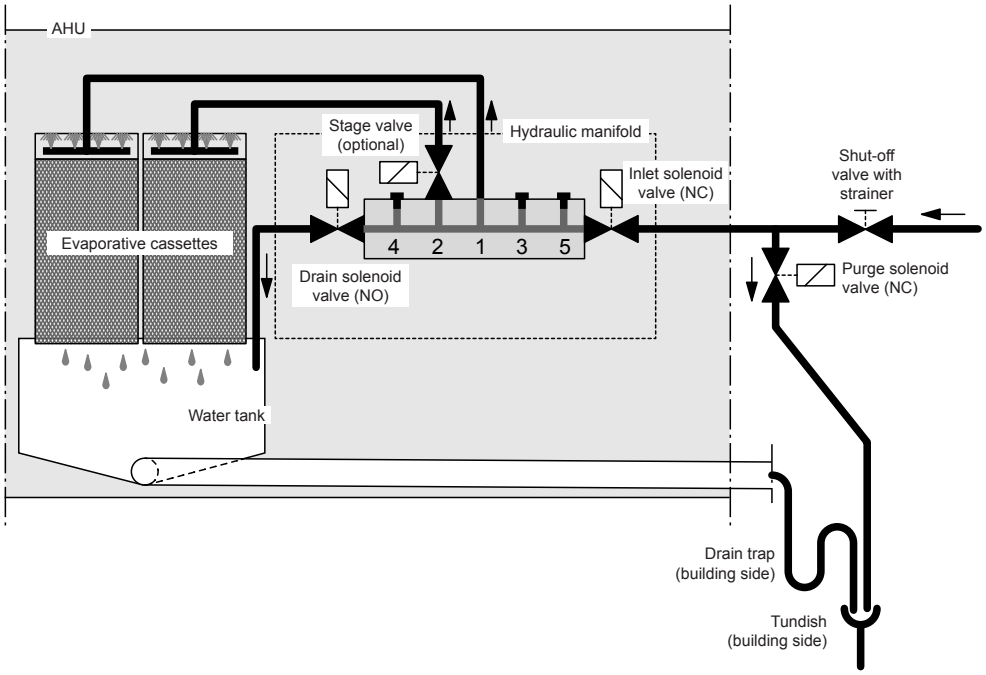


Fig. 7: Schematic flow diagram Nortec ME Direct Feed System (internally mounted)

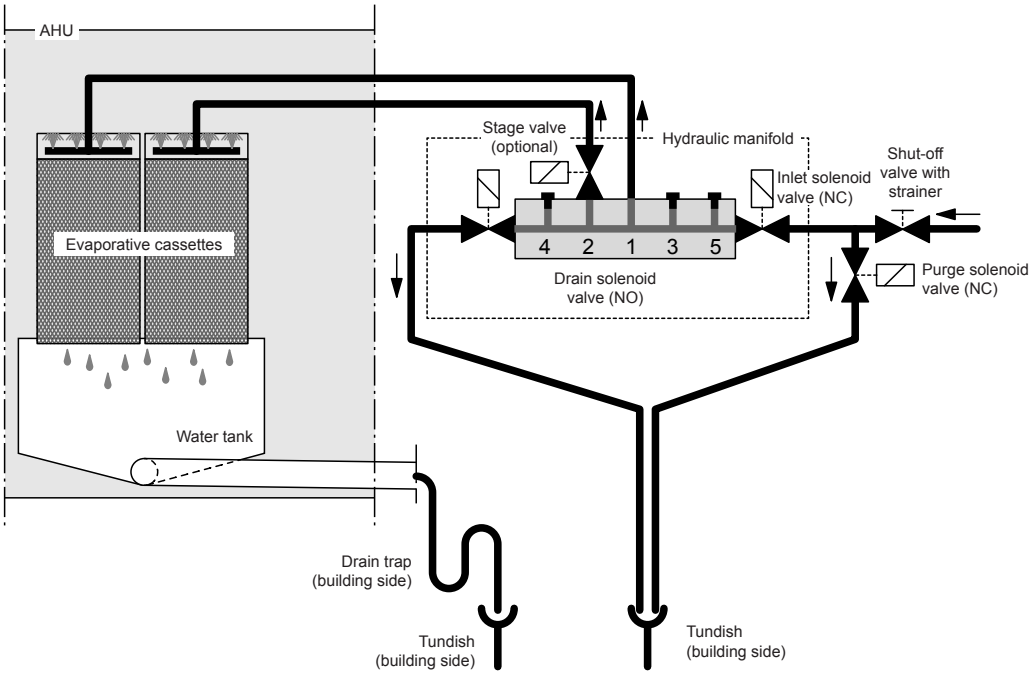


Fig. 8: Schematic flow diagram Nortec ME Direct Feed (externally mounted)

Functional description

As standard the Nortec ME Direct Feed is operated with On/Off control (requires a drain and a supply valve fitted to the hydraulic manifold (both valves available as options) and a customer supplied On/Off control or the optional direct feed On/Off control unit).

Equipped with the optional stage valves and the optional direct feed stage control unit, stage control can be established.

In case of a humidification/cooling request with **standard On/Off control** the drain solenoid valve (NO) closes and the inlet solenoid valve (NC) opens and the water flows to the distribution header above the evaporative cassettes.

In case of a humidification/cooling request with **optional stage control unit** the drain solenoid valve (NO) closes and the inlet solenoid valve (NC) opens. Depending on the demand signal and the evaporative module size additionally stage valve two, three, four and five open to supply water to the distribution header of the corresponding evaporative cassettes bank.

The distribution pipes inside the distribution header evenly supply the water to the entire surface of the evaporative cassettes where it flows down and humidifies the air flowing through the evaporative cassette matrix. The excess water not used for humidification flows to the water tank and then directly to the drain.

Both optional direct feed control units (On/Off control unit and stage control unit) support time based flushing of the water supply line once a purge valve (available as option) is fitted in the supply line. Every 20 hours the water supply line is flushed via the purge valve to prevent water stagnation in the water supply line which can lead to the grow of micro-organisms in the water supply line.

2.3 Evaporative cassettes/droplet separator

The evaporative cassettes are available in two different evaporative materials with different humidification efficiencies:

Material	Type	Cassette depth	Maximum humidification efficiency
Glass fibre	F75	100 mm (4")	75 %
	F85	150 mm (6")	85 %
	F95	200 mm (8")	95 %
Polyester	P85	200 mm (8")	85 %
	P95	300 mm (12")	95 %

The droplet separator cassettes are available in two different materials and must be used if face velocity exceeds 3.5 m/s (689 fpm):

Material	Media depth (Nominal dimensions)
Glass fibre	35 mm (1.38")
Polyester	65 mm (2.56")

Note: a deeper tank is required when P95 evaporative cassettes and droplet seperator are selected.

2.4 Evaporative module dimensions (internal install)

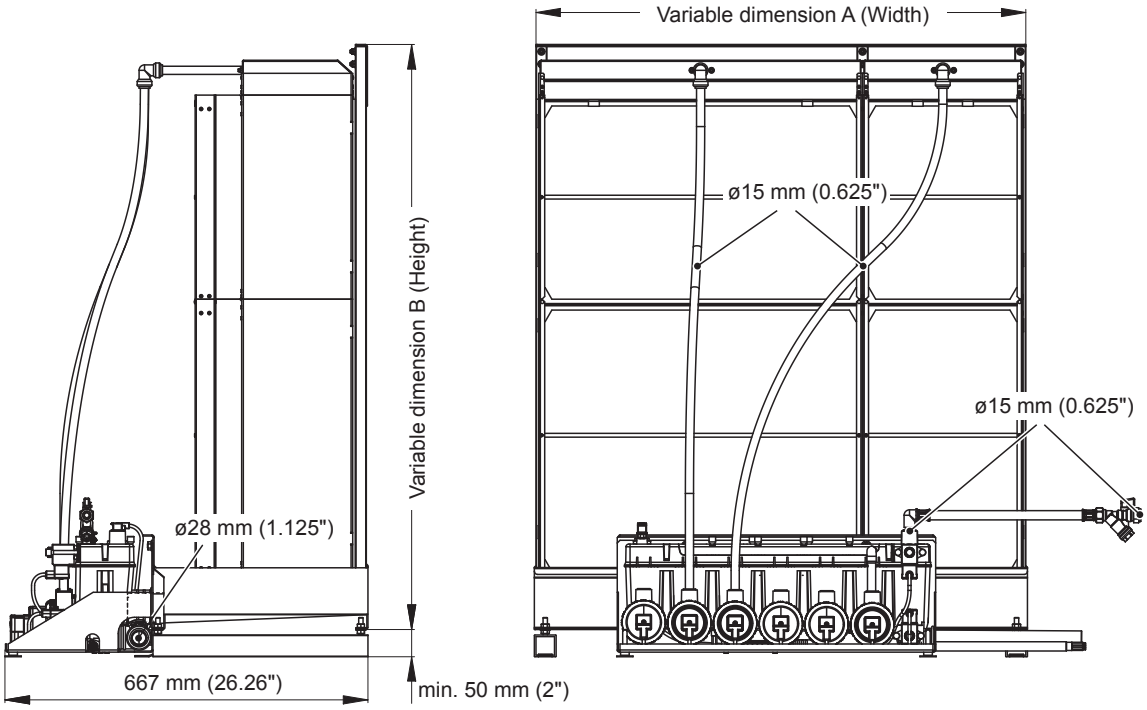


Fig. 9: Dimensions evaporative module Nortec ME Control (internal install)

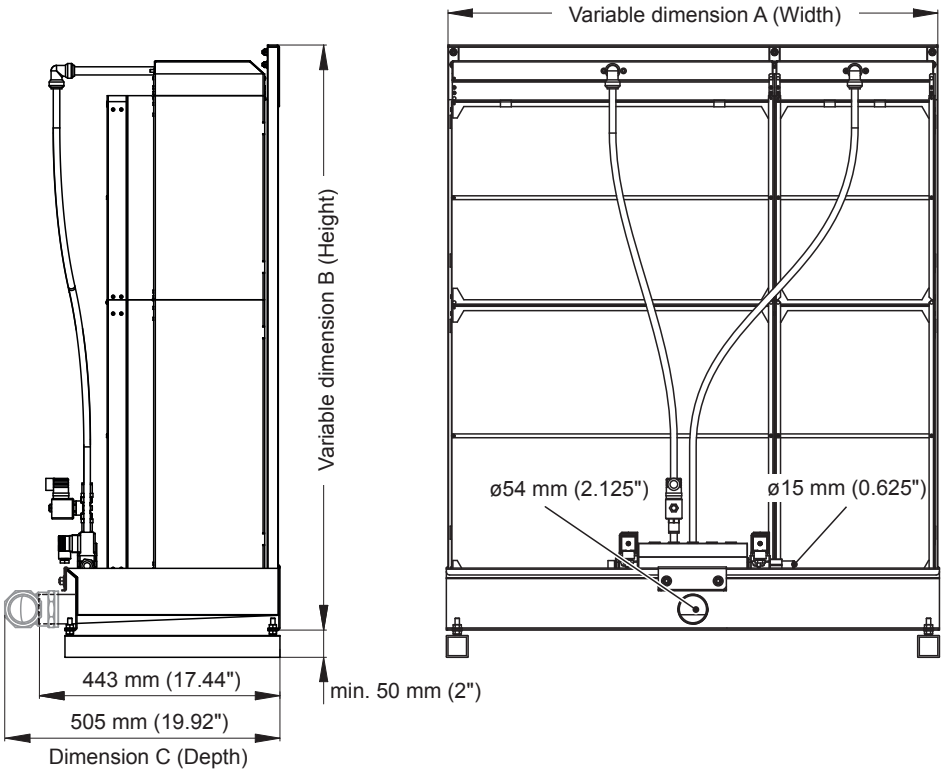


Fig. 10: Dimensions evaporative module Nortec ME Direct Feed (internal install)

2.5 Evaporative module dimensions (external install)

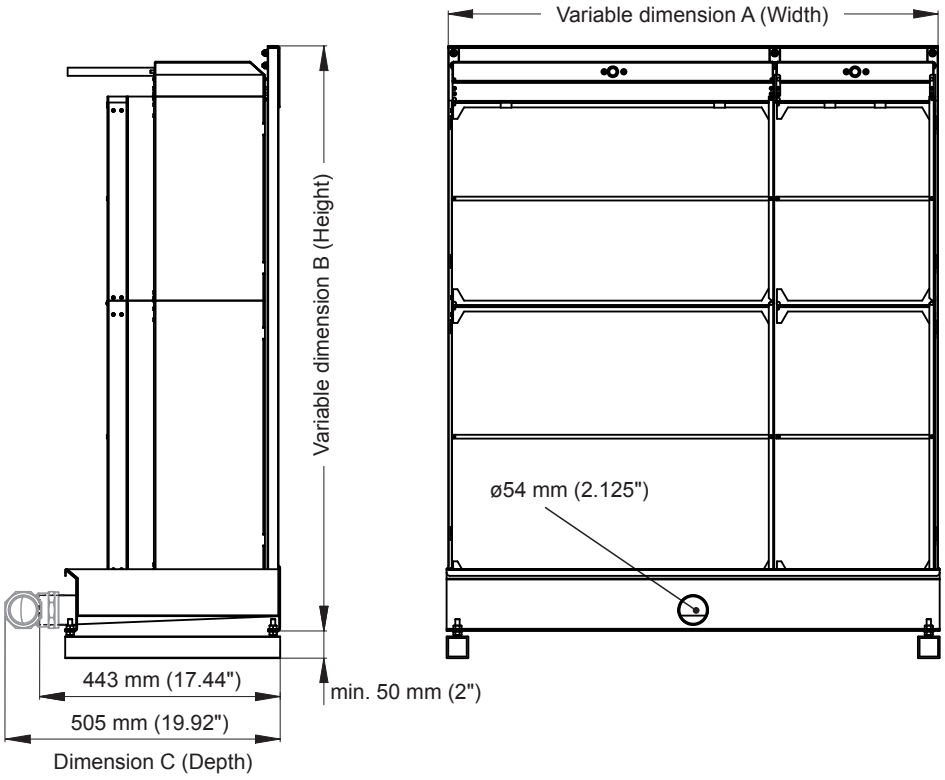


Fig. 11: Dimensions evaporative module Nortec ME Control and ME Direct Feed (external install)

2.6 Clearance requirements hydraulic modules (external install)

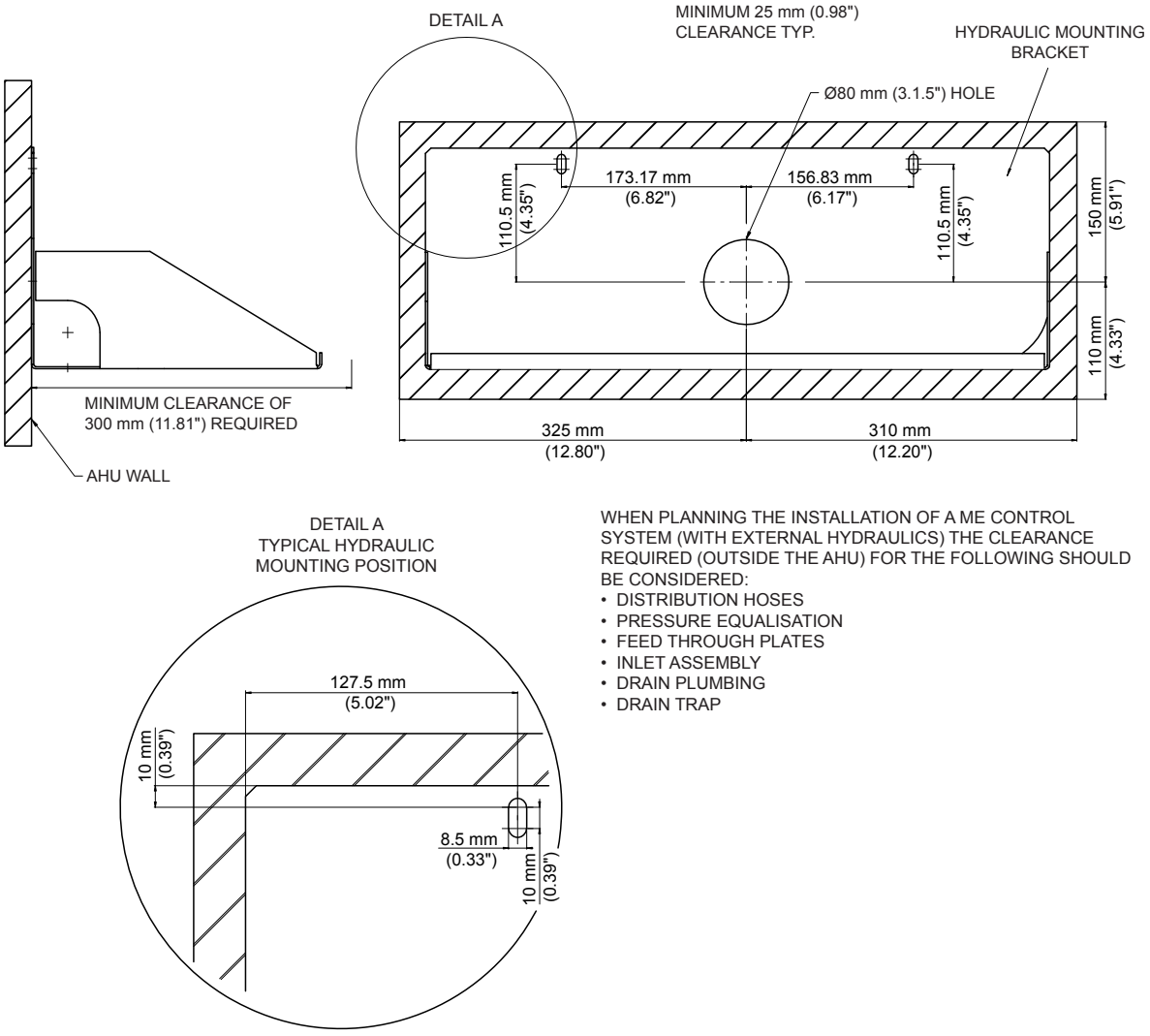


Fig. 12: Dimensions/clearances Nortec ME Control hydraulic module (external install)

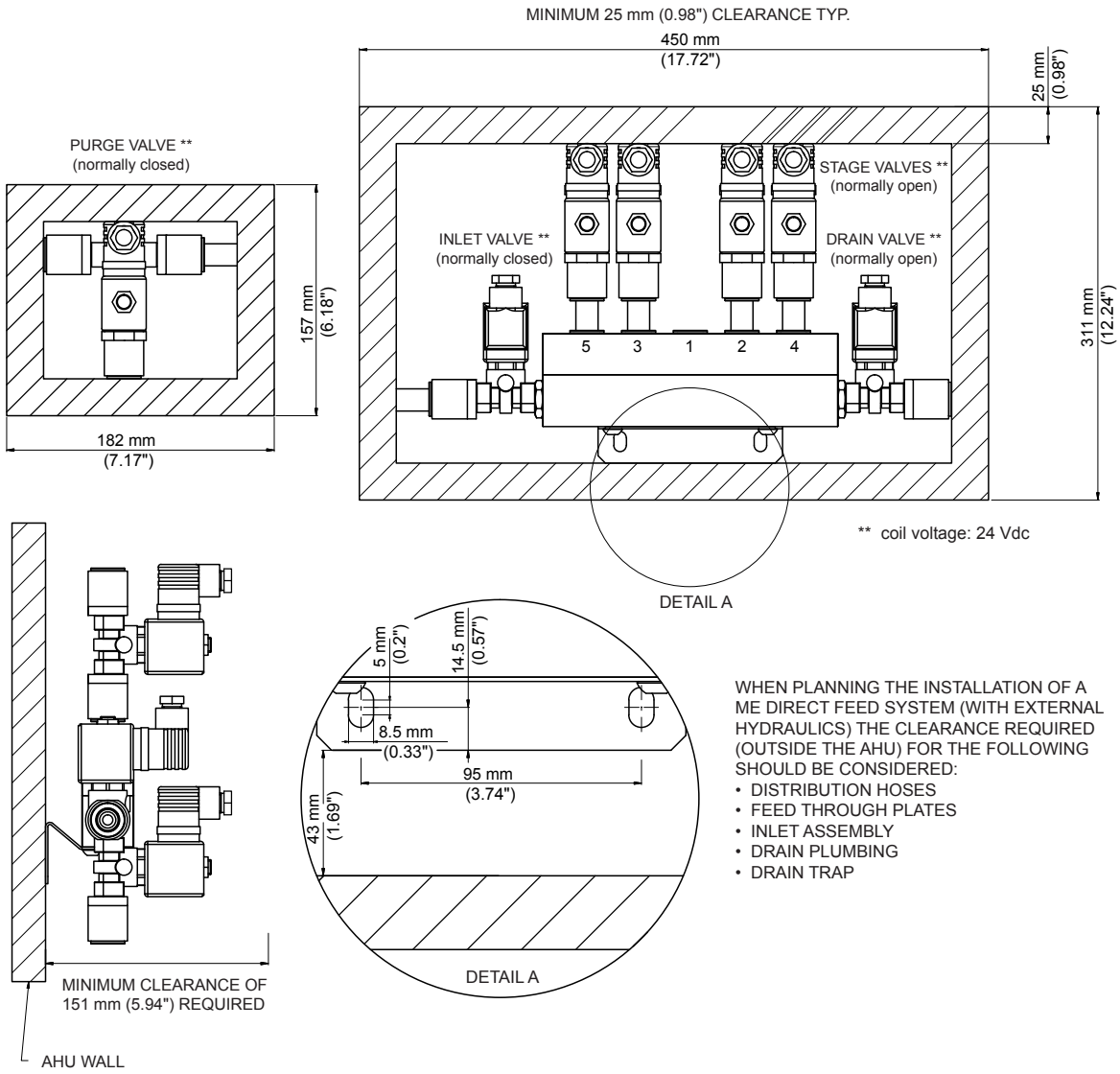


Fig. 13: Dimensions/clearances Nortec ME Direct Feed hydraulic manifold (external install)

Dimension	Internal Nortec ME Control	External Nortec ME Control	Internal Nortec ME Direct Feed	External Nortec ME Direct Feed
A (Width) **	604 mm (23.78")			
	754 mm (29.69")			
	904 mm (35.59")			
	1054 mm (41.50")			
	1204 mm (47.4")			
	1354 mm (53.31")			
	1504 mm (59.21")			
	1654 mm (65.12")			
	1804 mm (71.02")			
	1954 mm (76.93")			
	2104 mm (82.83")			
	2254 mm (88.74")			
	2404 mm (94.65")			
	2554 mm (100.55")			
	2704 mm (106.46")			
	2854 mm (112.36")			
	3004 mm (118.27")			
B (Height)	625 mm (25")			
	750 mm (30")			
	875 mm (35")			
	1000 mm (40")			
	1125 mm (45")			
	1250 mm (50")			
	1375 mm (55")			
	1500 mm (59")			
	1625 mm (64")			
	1750 mm (69")			
	1875 mm (74")			
	2000 mm (79")			
	2125 mm (84")			
	2250 mm (89")			
	2375 mm (94")			
	2500 mm (99")			
	2625 mm (104")			
	2750 mm (109")			
	2825 mm (114")			
	3000 mm (118")			
C (Depth)	667 mm (26.26")	443 mm (17.44") 505 mm (19.92 ") with elbow connector fitted		
Water supply connector	ø15 mm (0.625") compression fitting		ø15 mm (0.625") push-fit connector	
Water drain connector tank	ø54 mm (2.125")			
Water drain connector hydraulic module/manifold	ø28 mm (1.125")		ø15 mm (0.625") push-fit connector	

System weights

For system weights please contact your Nortec representative.

2.7 Operating range

Operating parameter	Range
Minimum continuous operating air temperature	10 °C (50 °F)
Maximum continuous operating air temperature	60 °C (140 °F)
Maximum feed water temperature	20 °C (68 °F)
Maximum matrix face velocity without droplet separator	3.5 m/s (689 fpm)
Maximum matrix face velocity with droplet separator	4.5 m/s (886 fpm)
Admissible water supply pressure	2...5 bar (29...72.5 psi)
Water quality	(see chapter *3.3 Inlet water quality requirements)*
Electrical supply	100-240 V / 1~ / 50/60 Hz
Power consumption Nortec ME Control	< 278 W (5 stages, no options fitted)

2.8 Options

Options	Nortec ME Control	Nortec ME Direct Feed
Glass fibre Media Composite non particle-releasing glass fibre media with anti-microbial impregnation and A2, S2, d0 (UL Class 1) fire rating. Available in 75% (100 mm/4"), 85% (150 mm/6") and 95% (200 mm/8") efficiencies.	•	•
Polyester Media Robust patented synthetic media with hygroscopic impregnation and DIN EN53483 Class F1 fire rating. Available in 85% (200 mm/8"), 95% (300 mm/12") efficiencies.	•	•
Droplet Separator Droplet catching matrix increasing maximum face velocity limit without droplet carry-over from 3.5 m/s (689 fpm) to 4.5 m/s (886 fpm).	•	•
Evaporative Module Blanking Kit to secure Nortec ME system and prevent air-bypass within the duct / AHU.	•	•
Hydraulic Module Cover Provides additional mechanical protection for the hydraulic module.	•	
Internal Installation Kit Kit to install the hydraulic module inside the duct / AHU.	•	
External Installation Kit Kit to install the hydraulic module outside the duct / AHU.	•	
Remote Fault Indication Provides volt-free contacts for remote fault and service requirement indication for BMS systems.	•	
Freeze Protection Stat Low temperature protection system to prevent damage to the Nortec ME in winter conditions.	•	
BMS Connectivity LonWorks / BacNet (available separately) BMS communication protocol for remote system monitoring.	•	
Leak Detection Provides additional fault indication for the Nortec ME by monitoring for standing water detected in duct / AHU.	•	•
Conductivity monitoring Water conductivity controlled system with thermal compensation to maintain hygiene and minimise media scaling.	•	

Options	Nortec ME Control	Nortec ME Direct Feed
Submerged UV Submerged ultra-violet steriliser installed in the evaporative module tank to enhance system hygiene. Available to suit systems 900 mm (35.43") wide or greater.	•	
PureFlo Ag+ Silver-ion anti-microbial system installed in the water supply line to enhance system hygiene with a residual effect.	•	•
In-Line UV Ultra-violet steriliser installed in the water supply line to enhance hygiene	•	•
Dosing Pump Dosing system for use with polyester media to enhance water absorption on system start-up.	•	
Stage Valves Valve kit which facilitates stage control of direct feed systems using customer controls or the Nortec ME Direct Feed stage control unit. Available in 2, 3, 4 and 5 stage versions.		•
Inlet, Drain and Purge Valve Valve kit for customers who wish to create their own basic on/off direct feed control system.		•
On/Off Control Unit On/Off control unit for simple control of Nortec ME Direct Feed systems which includes timed purge function to enhance system hygiene.		•
Stage Control Unit Stage control unit for simple analogue control of Nortec ME Direct Feed systems which includes timed purge function to enhance system hygiene.		•

3 Installation requirements

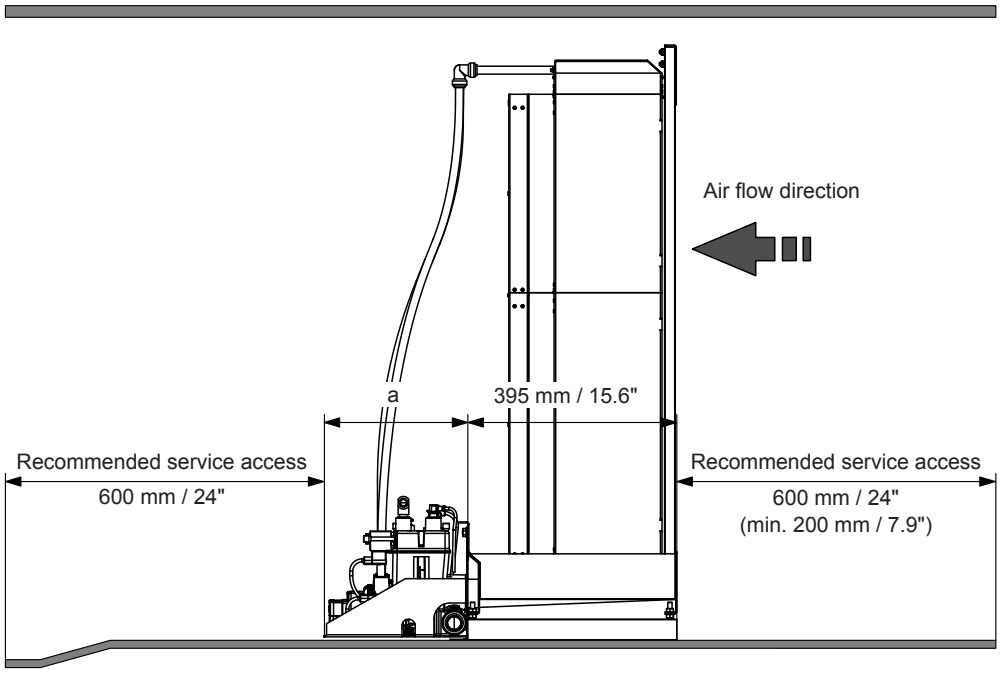
3.1 Requirements regarding the AHU/air duct

The following requirements regarding the AHU/air duct must be observed:

- The AHU/air duct floor must be designed with a loading capacity capable of supporting the evaporative module's weight. The weight of the evaporative module must be calculated. Please contact your Nortec representative in this matter.
- In the area where the evaporative module is installed the floor of the AHU/air duct must offer a plane support (lengthwise and crosswise).
- The duct/AHU section where the evaporative module is to be installed must be waterproof.
- Downstream, directly after the evaporative module a **drain pan with provision for running water to waste** must be installed. The drain must be connected via a drain trap to the waste water line of the building. The drain trap must be sufficiently high, so that the drain trap is not emptied by the air pressure in the duct. The drain pan and the drain trap must be accessible for cleaning and disinfection as part of the periodic maintenance of the system.
- For installation and maintenance sufficiently large maintenance doors before and after the evaporative module must be available in the AHU/air duct.
- The supply air must be filtered. We recommend to install an **air filter with quality standard F7 (EU7)** or better before the evaporative module. If no air filter or an air filter with lower quality is installed an increased maintenance will result.
- An **even air flow over the full cross section** of the evaporative module must be guaranteed.
- In case of low ambient temperature the AHU/air duct must be insulated to prevent the moist air from condensing inside the duct.
- If the AHU/air duct is equipped with a heating coil, make sure it is at least 600 mm (24") away from the evaporative module.
- Appropriate clearance must be available for the hydraulic module/hydraulic manifold (and associated plumbing) when installing externally.

3.2 Requirements regarding the positioning of the evaporative module

– For inspection, commissioning and maintenance we recommend a minimum free space of 600 mm (24") before and after the evaporative module.



Dimension “a”:

ME Control (internal mounting):	272 mm (10.7")
ME Control (external mounting):	111 mm (4.4")
ME Direct Feed (external mounting):	111 mm (4.4")
ME Direct Feed (external mounting):	111 mm (4.4")

Fig. 14: Positioning of the evaporative module

– The following side and top clearances must be observed, when positioning the unit.

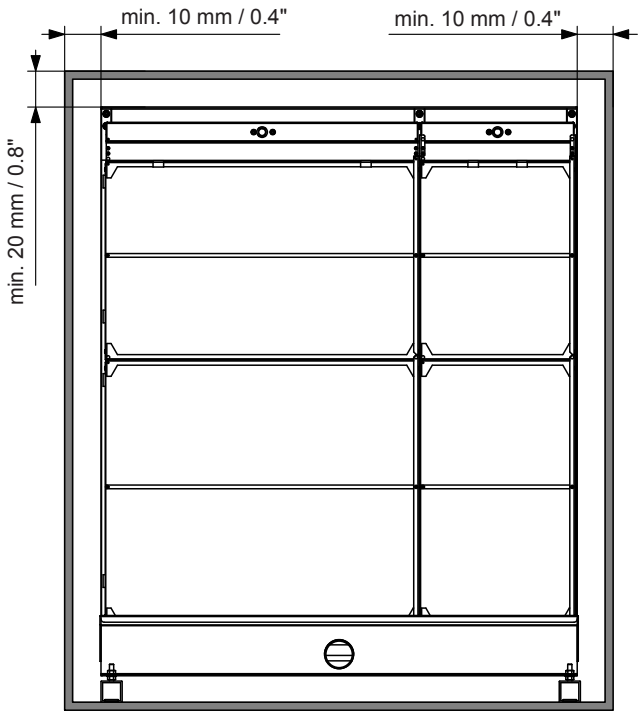


Fig. 15: Minimum side and top clearance for evaporative module

– If possible, the evaporative module should be positioned on the **negative pressure**, i.e. suction side of the fan (Position 1 in the diagram below).

The maximum matrix face velocity is 3.5 m/s (689 fpm) (without droplet separator) or 4.5 m/s (886 fpm) (with droplet separator), for both installation positions.

Note: Laminar air flow must be provided for system efficiency and to avoid droplet carryover!

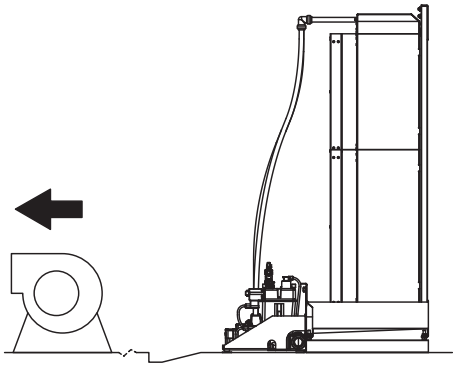
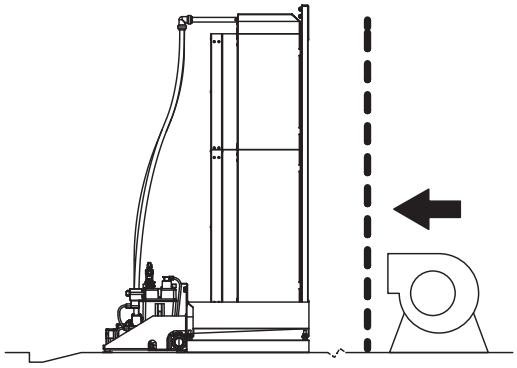
Position 1 – Negative pressure (fan suction)	**Position 2 – Positive pressure (fan discharge)**
	

Fig. 16: Mounting position in relation to the fan position

3.3 Inlet water quality requirements

Nortec Humidity Ltd. recommends that the Nortec ME must be connected to a **clean, wholesome (drinking water quality) mains water supply**. For areas of hard water and to minimise scale build up the water supply may be treated by a reverse osmosis system (RO).

Reverse osmosis

For Nortec ME systems supplied with RO water it is recommended that the system is operated within the following parameters. The use of RO water fed tanks and reservoirs is only permitted as part of a managed and hygiene monitored water system and should form part of the water system risk assessment.

System	Conductivity
Nortec ME Control	> 5 µS cm-1 at 20 °C (68 °F)
Nortec ME Direct Feed	> 30 µS cm-1 at 20 °C (68 °F)

Other water supplies

There is a growing demand to utilise sustainable water sources to help overcome scarcity challenges and recycle water. It is possible to use high-quality, treated effluent for non-wholesome applications. The following gives guidance on reclaimed water quality that may be acceptable for use within the Nortec ME. “Effluent treated water” must be treated by an appropriate water treatment method and risk assessed to ensure it is safe and suitable for use in the Nortec ME unit. It is the responsibility of the user to ensure that the water supply system is part of a managed, hygiene monitored water system, risk assessed and complies with the local regulations and bylaws.

Below are example water conditions that would allow a Nortec ME to operate within specification.

Parameter	Content in supply water	Concern
Temperature	< 20 °C (68 °F)	Warm water favours growth of bacteria
Aluminium	-	No specific concerns
Ammonium	< 0.50 mg/l	Odour passed to air
Calcium	< 300 mg/l	Scale formation
Chloride	< 300 mg/l	Corrosion of stainless steel
Colour	None	Not directly a concern
Copper	< 1 mg/l	Deposits and corrosion stimulation
Conductivity	< 650 µS cm-1 at 20°C (68 °F)	Total hardness and scale formation.
pH	6.5 to 9.5	Acid or Alkali damage to equipment.
Iron	< 0.5 mg/l	Deposit formation on oxidation and a critical support role in Legionella growth.
Manganese	< 0.1 mg/l	Deposit formation
Nitrate	-	No specific concerns
Nitrite	-	No specific concerns
Odour	Acceptable to users	Smell passed to air
Sulphate	< 250 mg/l	No specific comments
Sodium	-	No specific concerns
Total organic carbon	-	No specific concerns
Turbidity	< 5 NTU	No specific concerns

Parameter	Content in supply water	Concern
Colony count 22°C	< 1000 cfu/ml	Indicator of contaminated water supply
Coliform bacteria	< 10 cfu/100 ml	Indicator of poor water quality
Legionella bacteria	< 50 cfu/1000 ml	Risk of Legionella
Pseudomonas species	< 10 cfu/100 ml	Indicator of slime forming potential

Controlled substances

DANGER!

Many of the following controlled substances are toxic; for example vinyl chloride is highly toxic, flammable and carcinogenic and could be evaporated off the matrix and passed to the airflow. Therefore it is important to note that any supply water coming from complex waste water, which may contain these contaminates should therefore be carefully risk assessed by a water treatment specialist.

Controlled substances
Clostridium perfringens (including spores)
Acrylamide
Antimony
Arsenic
Benzene
Benzo(a)pyrene
Boron
Bromate
Cadium
Chromium
Cyanide

Controlled substances
1,2-dichloroethane
Epichlorohydrin
Fluoride
Lead
Mercury
Nickel
Pesticides
Polycyclic aromatic hydrocarbons
Selenium
Tetrachloroethene and Trichloroethene
Trihalomethanes
Vinyl chloride

Water monitoring

The Nortec ME water system must be monitored for hygiene as part of the maintenance programme for the building in which it is installed.

Disinfection Chemical

Depending on the system hygiene, it is advised that preventative disinfection chemical should be added to the Nortec ME water tank (Nortec ME Control only) at an appropriate frequency, such as a monthly basis.

Nortec recommends adding disinfection chemical DISIFIN XL to the tank at approx 500 ppm strength on a monthly basis to control microbiological activity. DISIFIN XL is a safe, non toxic, environmental friendly & 100% biodegradable chemical which provides a prophylactic, disinfection dose and is effective against all types of microorganisms including; legionella and E.coli.

DISIFIN XL may be added to the tank whilst the system continues operating and left to dissolve away naturally. Please refer to the maintenance section for further guidance.

Note: Adding DISIFIN XL or other disinfection chemicals will increase the conductivity in the tank. This should be taken into account on systems where a conductivity control system is in use (refer to the software section in the operation manual).

If you are in any doubt about the suitability of water quality please contact your Nortec representative who will be pleased to support you.

4 Specification

4.1 Specification for the Nortec ME Control

General:

1. The humidifiers will comply fully with “New Approach” CE Directives and UL requirements.
2. The humidifier evaporative glass fibre material shall be A2-S2,-D0 (UL Class 1) fire rating and be non-particle releasing.
3. The humidifier should have the option of utilising polyester evaporate material with a fire rating DIN EN 53438 Class F1.
4. The humidifier shall be powered by a 100-240V single phase 50/60Hz power supply with a low power consumption of less than 278W.
5. The humidifier shall be designed to optimise the airflow across its surface area and allow evaporation of the desired quantity of water, with no carry-over of water droplets into the airstream.
6. The rate of evaporation shall be dictated by the air volume and temperature, humidifier physical dimensions and the matrix depth. The depth of matrix used shall govern the efficiency of the system up to 95%.
7. The construction of this humidifier will allow for an optional droplet seperator to be fitted should the air velocity be greater than 3.5 m/s (689 fpm) to ensure no droplet carryover.
8. The humidifier shall be evaporative adiabatic type and consequently incorporate a free cooling effect following the enthalpy line on the psychometric chart.
9. All evaporative module metalwork shall be 304 stainless steel that includes a water distribution system to ensure uniform delivery of the water across the evaporative surface.
10. The evaporative humidifier shall include a patented compact self contained hydraulic unit that incorporates a water tank and up to 5 pumps that can be mounted inside or outside the AHU. The hydraulic unit shall include Biomaster antimicrobial additive.
11. The hydraulic unit shall be installed either inside, or outside the air handling unit to allow for maintenance of the hydraulic unit to be carried out without interrupting the supply air.
12. The humidifier will have a pump assisted drain minimise hygiene cycle duration. All tank sizes should drain in <15 minutes.
13. The humidifier overflow shall be integrated into a single drain connection for simple installation.
14. A maximum of 5 stage control shall be available as standard and controlled by up to 5 24Vdc electronically commutated pumps which require no mechanical alteration to control flow rates.
15. Each humidifier must include a separate programmable control unit. The control unit must provide for fully automatic control of the humidification system.
16. The control unit will include a touch screen control unit that allows software based commissioning and shows detailed operational, service and fault conditions.
17. Where necessary the control unit may be located up to 10 meters away from the evaporative module. It shall be pre-wired with 5 m (197") of cable.

18. The control unit shall be capable of accepting the following methods of humidity control:
    - Humidistat/thermostat or BMS interlock.
    - Integral programmable on/off timer.
    - Nortec ME Control: 0-5V, 1-5V, 0-10V, 2-10V, 0-16V, 3.2-16V, 0-20V, 0-20mA, 4-20mA
19. The control unit will have both a service time counter and real time hours run counter, in addition to a PureFlo Ag+ counter.
20. The control unit will initiate and control water quality dependent cleaning cycles to control the build up of concentrates in the Module Tank.
21. The control unit must initiate timed drain down of the module tank at least once every 24hrs of in-activity to prevent stagnation. In the event of no demand for humidity, the tank will drain and remain empty.
22. Systems 900 mm (35.4") or wider can be supplied with a submerged UV water treatment system that kills micro-organisms in the reservoir. Fault detection included.
23. The humidifier shall be designed to be fully evaporative so that there is no aerosol carry over, which might carry microbes.
24. The humidifier shall be commissioned by a customer services engineer, approved supplier, or other suitably trained individual.
25. Conductivity option shall be available.
26. USB fault log download / software upgrade capability.
27. Modbus connectivity included as standard.
28. BMS options (Bacnet/ LonWorks) shall be available.

Equipment Supplier:

The system is to be manufactured by:
Condair plc
Artex Avenue, Rustington, LITTLEHAMPTON
West Sussex. BN16 3LN. UK

Tel. 01903850200
Fax. 01903 850 345.

email: sales@condair.com
web: www.condair.co.uk

4.2 Specification for the Nortec ME Direct Feed

General:

1. The humidifier will comply fully with “New Approach” CE Directives.
2. The humidifier evaporative glass fibre material shall be A2-S2,-D0 (UL Class 1) fire rating and be non-particle releasing.
3. The humidifier should have the option of utilising polyester evaporate material with a fire rating DIN EN 53438 Class F1.
4. The humidifier shall be powered by a 100- 240V single phase 50/60Hz power supply with a low power consumption of less than 125W.
5. The humidifier shall be designed to optimise the airflow across its surface area and allow evaporation of the desired quantity of water, with no carry-over of water droplets into the airstream.
6. The rate of evaporation shall be dictated by the air volume and temperature, humidifier physical dimensions and the matrix depth. The depth of matrix used shall govern the efficiency of the system up to 95%.
7. The construction of this humidifier will allow for an optional droplet seperator to be fitted should the air velocity be greater than 3.5 m/s (689 fpm) to ensure no droplet carryover.
8. The humidifier shall be evaporative adiabatic type and consequently incorporate a free cooling effect following the enthalpy line on the psychometric chart.
9. All evaporative module metalwork shall be 304 stainless steel that includes a water distribution system to ensure uniform delivery of the water across the evaporative surface.
10. The hydraulic unit shall be installed either inside, or outside the air handling unit to allow for maintenance of the hydraulic unit to be carried out without interrupting the supply air.
11. A 5 stage control option shall be available.
12. Where necessary the optional control unit may be located up to 10 meters away from the evaporative module. It shall be pre-wired with 5 m (197") of cable.
13. The option to use the following humidity control methods shall be available:
    - Humidistat/thermostat or BMS interlock
    - 0-10Vdc or 2-10Vdc control signal (stage control unit only)
14. The humidifier shall be designed to be fully evaporative so that there is no aerosol carry over, which might carry microbes.
15. The humidifier shall be commissioned by a customer services engineer, approved supplier, or other suitably trained individual.

Equipment Supplier:

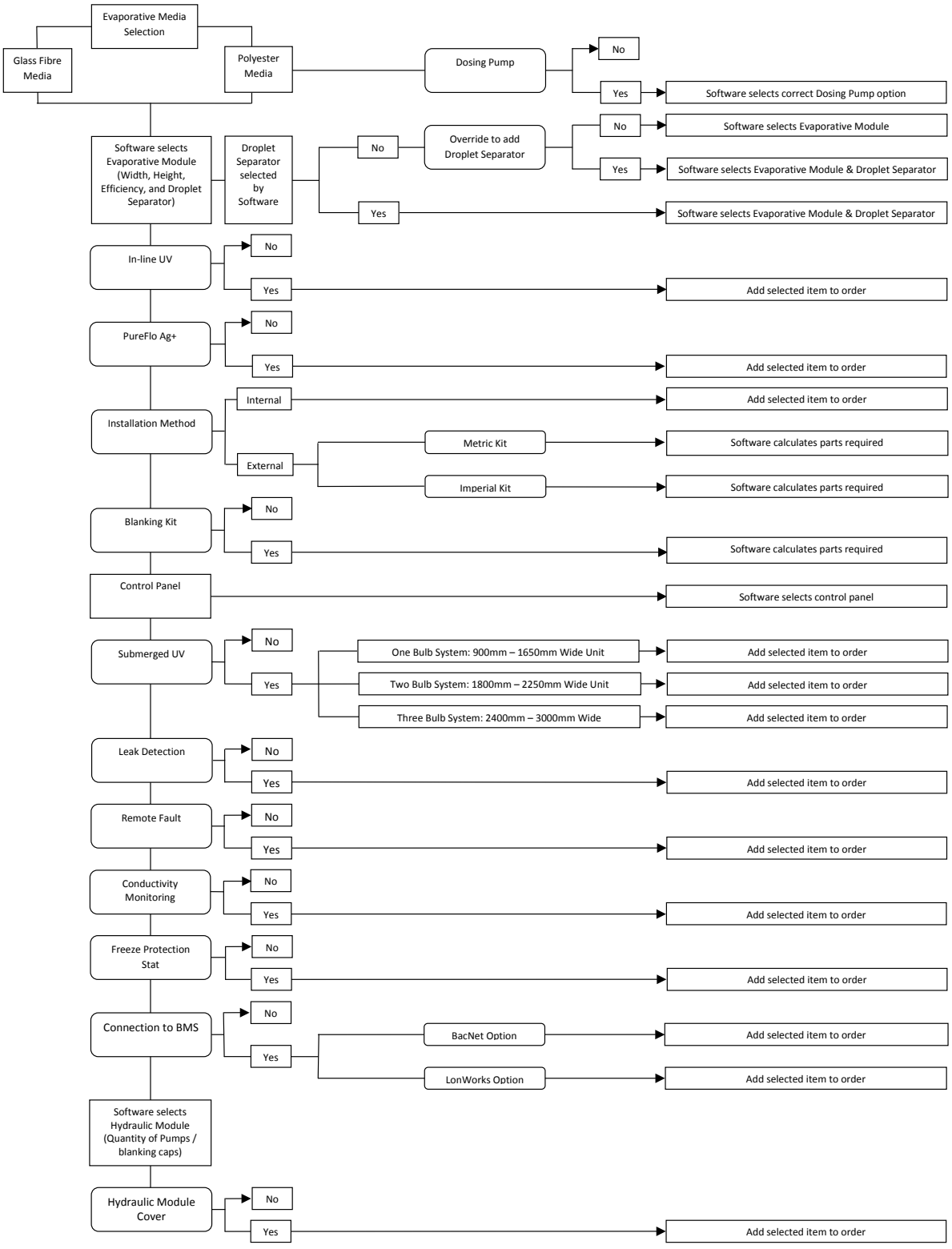
The system is to be manufactured by:
Condair plc
Artex Avenue, Rustington, LITTLEHAMPTON
West Sussex. BN16 3LN. UK

Tel. 01903850200
Fax. 01903 850 345.

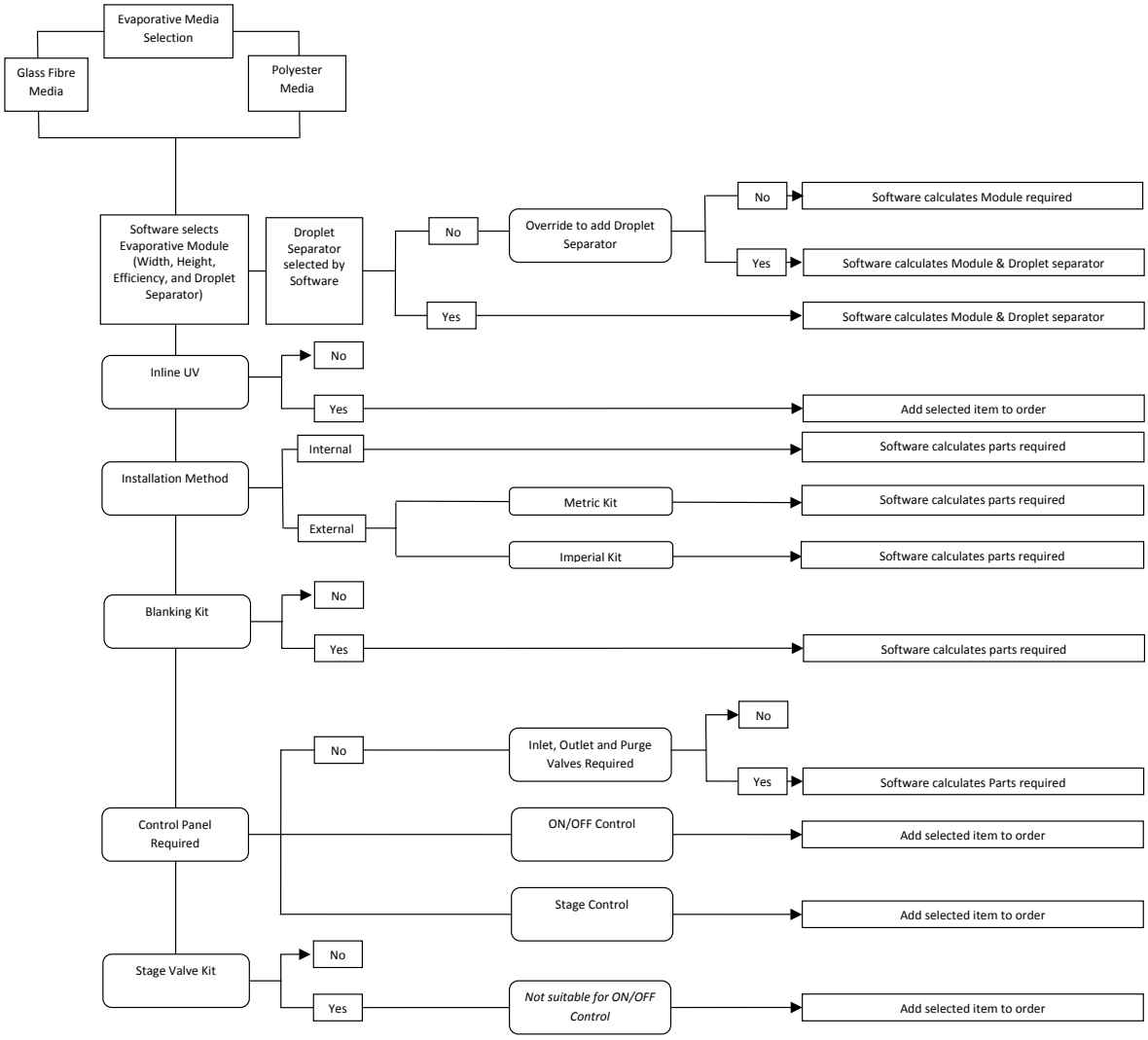
email: sales@condair.com
web: www.condair.co.uk

5 System selection charts

5.1 System selection Nortec ME Control



5.2 System selection Nortec ME Direct Feed



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